VOLUME 33 NUMBER 1
ISSN 1071-2690
JANUARY 1997

CONTENTS

BOOK REVIEWS

Methods in Molecular Biology
Gerald R. Grimsley and J. Martin Scholtz 1

RNA Isolation and Analysis
Edward D. Harris 2

INVITED REVIEW

Stem Cells of the Respiratory Epithelium and Their *In Vitro* Cultivation
Makito Emura 3

LETTERS TO THE EDITOR

Scientific Reports

The Transfection of Rabbit Articular Chondrocytes Is Independent of Their Differentiation State
Say Viengchareun, Sophie Thenet-Gauci, Nathalie Steimberg, Christine Blancher, Patricia Crisanti, and Monique Adolphe 15

Isolation of Normal Human Colonic Mucosa: Comparison of Methods
David M. Wildrick, Patrice Lointier, David H. Nichols, Richard Roll, Belle Quintanilla, and Bruce M. Boman 18

WST-1 Assay—A Simple Colorimetric Method for Virus Titration
Eberhard Nissen, Georg Pauli, and Dirk Vollenbroich 28

CELLULAR MODELS

Reconstituted Human Gingival Epithelium: Nonsubmerged *In Vitro* Model
Agnes Delcourt-Huard, Anne Corlu, Annick Joffre, Henry Magloire, and Martine Bonnaure-Mallet 30

Characterization of a SV40-Transformed Rheumatoid Synovial Fibroblast Cell Line Which Retains Genotypic Expression Patterns: A Model for Evaluation of Anti-Arthritic Agents
Huang-Ge Zhang, Warren D. Blackburn, Jr., and Phillip P. Minghetti 37

Generation of a Human Melanocyte Cell Line by Introduction of HPV16 E6 and E7 Genes
I. Caroline Le Poole, Frank M. Van Den Berg, René M. J. G. J. Van Den Wijngaard, Denise A. Galloway, Peter J. Van Amstel, Anita A. M. Buffing, Henk L. Smits, Wiete Westerhof, and Pranab K. Das 42

A Colonic Tissue Architecture Assay Applied to Human Colon Carcinoma Cells
Christian Ilantzis and Clifford P. Stanners 50

GENETICS

The Effects of Human Leukemia Inhibitory Factor (HLIF) and Culture Medium on *In Vitro* Differentiation of Cultured Porcine Inner Cell Mass (PICM)
Karen Moore and Jorge A. Piedrahita 62

VOLUME 33 NUMBER 2
ISSN 1071-2690
FEBRUARY 1997

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

Adaptation of an Automated Selective Dissociation Procedure to Two Novel Spheroid Types
L. A. Kunz-Schughart and J. P. Freyer 73

3T3-L1 Adipocytes as a Cell Culture Model of Insulin Resistance
Victoria P. Knutson and Yvonne Balba 77

Culture of Airway Epithelial Cells Collected by a Nasal Brushing Technique
Michael A. Bridges 82

Paxillin Increases as Retinoic Acid or Vitamin D3 Induce HL-60 Cell Differentiation
Joseph D. Platko and Andrew Yen 84

An EBV-Transformed Owl Monkey B-Lymphocyte Cell Line
J. G. Scammell, P. D. Reynolds, M. Y. Elkhalifa, J. A. Tucker, and C. M. Moore 88

CELLULAR MODELS

Compartmentalized Coculture of Porcine Arterial Endothelial and Smooth Muscle Cells on a Microporous Membrane
Fabienne Kinard, Thérèse Sergent-Engelen, André Trouet, Claude Remacle, and Yves-Jacques Schneider 92

Isolation and Long-Term Culture of Gallbladder Epithelial Cells from Wild-Type and CF Mice
Rahul Kuver, Christopher Savard, Toan D. Nguyen, William R. A. Osborne, and Sum P. Lee 104

Adhesion, Orientation, and Movement of Cells Cultured on Ultrathin Fibronectin Fibers
B. Wojciak-Stothard, M. Denyer, M. Mishra, and R. A. Brown 110

GROWTH, DIFFERENTIATION AND SENESCENCE

Lipid, Apolipoprotein, and Lipoprotein Synthesis and Secretion during Cellular Differentiation in CACO-2 Cells
M. Mehran, E. Levy, M. Bendayan, and E. Seidman 118

Phosphorylation of a 27-kDa Protein Correlates with Survival of Protein-Synthesis-Inhibited MCF-7 Cells
Avraham Geier, Rina Hemi, Michal Haimsohn, Rachel Beery and Avraham Karasik 129

GENETICS

Cytogenetic Analyses of a Murine Carcinoma Cell Line and Six Metastatic Derivatives with Different Degrees of Radioresistability
Roudabeh J. Jamasbi, Ming-Qi Ye, and Tonya M. Norvell 137

Erratum 145

VOLUME 33 NUMBER 3
ISSN 1071-2690
MARCH 1997

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

LNCaP-OM, A New Androgen-Resistant Prostate Cancer Subline
Micsunica Platica, Ram S. Verma, Michael J. Macera, and Ovidiu Platica 147
Multilayer Hepatocyte Aggregates on Porous Expanded Polytetrafluoroethylene
Takayoshi Tokiwa and Makoto Kodama 150
Effect of Medium Serum Concentration on N1E-115 Neuroblastoma Membrane Potential Development
William S. Kisaalita and John M. Bowen 152
An Immortalized Rat Mesangial Cell Line
K. Nitta and N. Horiba 156
Human Anterior Pituitary Adenoma Cell Attachment *In Vitro*
S. L. Atkin, L. Hipkin, R. V. Jeffreys, P. M. Foy, and M. C. White 158
A New Cell Line from Larval Ovaries of *Spodoptera Litura* (F.) (Lepidoptera: Noctuidae)
U. Pant, S. S. Athawale, A. B. Sudeep, and K. Banerjee 161

CELLULAR MODELS

Development and Characterization of SV40 Immortalized Rat Submandibular Acinar Cell Lines
D. O. Quissell, K. A. Barzen, D. C. Gruenert, R. S. Redman, J. M. Camden, and J. T. Turner 164
In Vitro Formation of Mineralized Cartilagenous Tissue by Articular Chondrocytes
R. A. Kandel, J. Boyle, G. Gibson, T. Cruz, and M. Speagle 174
Addition of Both Platelets and Thrombin in Combination Accelerates Tumor Cells to Adhere to Endothelial Cells *In Vitro*
Ingrid B. Helland, Beate Klementsen, and Leif Jørgenson 182
Effect of Atrophy and Contractions on Myogenin mRNA Concentration in Chick and Rat Myoblast Omega Muscle Cells
Jean M. Krebs and Richard M. Denney 187
Mechanisms of Liquid Flux Across Pulmonary Alveolar Epithelial Cell Monolayers
Gerasimos S. Filippatos, W. Frank Hughes, Renli Qiao, J. Iasha Sznajder, and Bruce D. Uhal 195

BIOTECHNOLOGY

The Use of Flow Cytometry and Fluorescein-Labeled Antibodies to Measure Specific Milk Proteins in Bovine Mammary Epithelial Cells
J. E. Keys, A. J. Guidry, and E. Cifrian 201
Bovine Mammary Explant Versus Primary Cell Cultures: Effect of Bovine Somatotropin and Insulinlike Growth Factor-I on DNA Content and Protein Synthesis
J. E. Keys, E. Cifrian, A. J. Guidry, and H. M. Farrell 206

GROWTH, DIFFERENTIATION AND SENESCENCE

TGFβ1 Induces Growth Arrest and Apoptosis but not Ciliated Cell Differentiation in Rat Tracheal Epithelial Cell Cultures
Elena Antoshina and Lawrence E. Ostrowski 212

CELLULAR AND MOLECULAR TOXICOLOGY

The Cytotoxic Interaction of Inorganic Trace Elements with EDTA and Cisplatin in Sensitive and Resistant Human Ovarian Cancer Cells
Robert H. Maier, Susan M. Purser, Daniel L. Nicholson, and Walter J. Pories 218

VOLUME 33 NUMBER 4
ISSN 1071-2690
APRIL 1997

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

In Vitro Biocompatibility Test for Collagen-Based Dressings
Manimalha Balasubramani, Mary Babu, and P. K. Sehgal 223
Effects of Epidermal Growth Factor on Growth of Cell Lines Established from Cynomolgus Monkey Hepatocytes with SV40 T Antigen
J. Patrick Condreay, Lynn D. Condreay, and Brian E. Huber 228
Fin Cell Line from Isogeneic Ginbuna Crucian Carp
Satoshi Hasegawa, Chihaya Nakayasu, Nobuaki Okamoto, Teruyuki Nakanishi, and Yayoi Ikeda 232
Mineralization is More Reliable in Periosteum Explants from Size-Selected Chicken Embryos
Dinah Lovitch and Michael L. Christianson 234
Successful Establishment of Uveal and Conjunctival Melanoma *In Vitro*
Morgan McNamara and Susan M. Kennedy 236
Rapid and Irreversible Loss of Estrogen Receptor in Human Osteoblast-like Cells Following Culture in Phenol Red-Free Medium
J. Nasir and V. Speirs 240
Bovine Brain Microvascular Endothelial Cells Transfected with SV40-Large T Antigen: Development of an Immortalized Cell Line to Study Pathophysiology of CNS Disease
Monique F. Stins, Nemani V. Prasadarao, Jin Zhou, Moshe Arditi, and Kwang Sik Kim 243

CELLULAR AND MOLECULAR TOXICOLOGY

Oxidized LDL Inhibits Vascular Endothelial Cell Morphogenesis in Culture
Der-Yuan Wang, Vivian C. Yang, and Jan-Kan Chen 248

CELLULAR MODELS

Ratiometric Measurement of Intracellular pH of Culture Cells with BCECF in a Fluorescence Multi-Well Plate Reader
Roberta L. Grant and Daniel Acosta 256
Identification of a Subpopulation of Human Renal Microvascular Endothelial Cells with Capacity to Form Capillary-Like Cord and Tube Structures
Murphy Martin, Harald Schoecklmann, Gary Foster, Lise Barley-Maloney, James McKanna, and Thomas O. Daniel 261
Gene Transfer into Mouse Embryonic Stem Cell-Derived Cardiac Myocytes Mediated by Recombinant Adenovirus
Elizabeth M. Rust, Margaret V. Westfall, Linda C. Samuelson, and Jospeh M. Metzger 270

GROWTH, DIFFERENTIATION AND SENESCENCE

Energy State in HT-29 Cells is Linked to Differentiation
C. J. Michael Graz and Heather M. Cowley 277
Growth Requirements and Neoplastic Transformation of Two Types of Normal Human Breast Epithelial Cells Derived from Reduction Mammoplasty
Chien-Yuan Kao, Cory S. Oakley, Clifford W. Welsch, and Chia-Cheng Chang 282
Statistical Methods for Estimating Doubling Time in *In Vitro* Cell Growth
Dong K. Kim 289
Transcription Regulation of the TGF-β2 Gene in Choriocarcinoma Cells and Breast Carcinoma Cells: Differential Utilization of Cis-Regulatory Elements
Michelle Kingsley-Kallesen, Lance Johnson, Beáta Scholtz, David Kelly, and Angie Rizzino 294
Growth and Differentiation of Periodontal Ligament-Derived Cells in Serum-Free Defined Culture
Tetsuji Okamoto, Nobuhiro Yatsuzuka, Yoshiharu Tanaka, Mikio Kan, Takenori Yamanaka, Akihiko Sakamoto, Takashi Takata, Yasumasa Akagawa, Gordon H. Sato, J. Denry Sato, and Kazuaki Takada 302
1,25-Dihydroxyvitamin D_3 and Agents that Increase Intracellular Adenosine 3′,5′-Monophosphate Synergistically Inhibit Fibroblast Proliferation
Nava Saati, Amiram Ravid, Uri A. Liberman, and Ruth Koren 310

INFECTIOUS DISEASE/CELLULAR PATHOLOGY

Cytolytic Activity of *Bacillus thuringiensis* CryIC and CryIAc Toxins to *Spodoptera* sp. Midgut Epithelial Cells *In Vitro*
Shainn-Wei Wang and William J. McCarthy 315

VOLUME 33 NUMBER 5
ISSN 1071-2690
MAY 1997

CONTENTS

PROCEEDINGS—NASA BIOREACTORS WORKSHOP ON REGULATION OF CELL AND TISSUE DIFFERENTIATION

Cytogenetic, Morphologic and Oncogene Analysis of a Cell Line Derived from a Heterologous Mixed Mullerian Tumor of the Ovary
Jeanne L. Becker, Peter R. Papenhausen, and Raymond H. Widen 325
Cultivation of Fall Armyworm Ovary Cells in Simulated Microgravity
Karen M. Francis, Kim C. O'Connor, and Glenn F. Spaulding 332
Neonatal Rat Heart Cells Cultured in Simulated Microgravity
Robert E. Akins, Nancy A. Schroedl, Steve R. Gonda, and Charles R. Hartzell 337
GTSF-2: A New, Versatile Cell Culture Medium for Diverse Normal and Transformed Mammalian Cells
Peter I. Lelkes, Esther Ramos, Victor V. Nikolaychik, Dawn M. Wankowski, Brian R. Unsworth, and Thomas J. Goodwin 344
Induction of Carcinoembryonic Antigen Expression in a Three-Dimensional Culture System
J. M. Jessup, D. Brown, W. Fitzgerald, R. D. Ford, A. Nachman, T. J. Goodwin, and G. Spaulding 352
Three-Dimensional Culture of Bovine Chondrocytes in Rotating-Wall Vessels
Tacey L. Baker and Thomas J. Goodwin 358
Three-Dimensional Culture of a Mixed Mullerian Tumor of the Ovary: Expression of *In Vivo* Characteristics
Thomas J. Goodwin, Tacey L. Prewett, Glenn F. Spaulding, and Jeanne L. Becker 366
Establishment of a Three-Dimensional Human Prostate Organoid Coculture under Microgravity-Simulated Conditions: Evaluation of Androgen-Induced Growth and PSA Expression
Haiyen E. Zhau, Thomas J. Goodwin, Shi-Ming Chang, Tacey L. Baker, and Leland W. K. Chung 375
Microgravity Tissue Engineering
Lisa E. Freed and Gordana Vunjak-Novakovic 381
Skeletal Muscle Satellite Cells Cultured in Simulated Microgravity
Greg Molnar, Nancy A. Schroedl, Steve R. Gonda, and Charles R. Hartzell 386
A Novel Culture Morphology Resulting from Applied Mechanical Strain
R. A. Grymes and C. Sawyer 392
Changes in Gravity Inhibit Lymphocyte Locomotion through Type I Collagen
Neal R. Pellis, Thomas J. Goodwin, Diana Risin, Bradley W. McIntyre, Roland P. Pizzini, David Cooper, Tacey L. Baker, and Glenn F. Spaulding 398

VOLUME 33 NUMBER 6
ISSN 1071-2690
JUNE 1997

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

Distribution and Viability of Cultured Human Chondrocytes in a Three-Dimensional Matrix as Assessed by Confocal Laser Scan Microscopy
Joachim Aigner, Jesús Bujia, Peter Hutzler, and E. Kastenbauer 407
Sex Related Differences in the Adhesion, Migration, and Growth of Rat Aortic Smooth Muscle Cells in Culture
L. Bačáková, V. Mareš, V. Lisá, M.-G. Bottone, C. Pellicciari, and F. Kocourek 410
Application of Surfactin for Mycoplasma Inactivation in Virus Stocks
Eberhard Nissen, Georg Pauli, Joachim Vater, and Dirk Vollenbroich 414
Chick Embryo Brain Cultures Enriched for Neurons or Astroglial Cells Support the Replication of Influenza A, B, and C Viruses
M. S. Parker, R. J. O'Callaghan, and H. A. Spence 416
Initiation of Epithelial Cell Cultures from Palleal Buds of *Botryllus schlosseri*, A Colonial Tunicate
Baruch Rinkevich and Claudette Rabinowitz 422
A Cell Line from the Gill Tissues of Indian Cyprinoid *Labeo rohita*
P. S. Sathe, A. Basu, D. T. Mourya, B. A. Marathe, S. S. Gogate, and K. Banerjee 425
Adult Rat Cardiomyocyte Proliferation Assay
Duane M. Smith, Jr. and William C. Claycomb 428

CELLULAR MODELS

Three-Dimensional Endothelial-Tumor Epithelial Cell Interactions in Human Cervical Cancers
V. Chopra, T. V. Dinh, and E. V. Hannigan 432
TGF-β1 Reverses PDGF-Stimulated Migration of Human Aortic Smooth Muscle Cells *In Vitro*
Leslie Engel and Una Ryan 443
Improved Conditions for Culture of Biosynthetically Active Cockroach Corpora Allata
Glenn L. Holbrook, Ann-Shyn Chiang, and Coby Schal 452
Three-Dimensional Growth Patterns of Various Human Tumor Cell Lines in Simulated Microgravity of a NASA Bioreactor
M. Ingram, G. B. Techy, R. Saroufeem, O. Yazan, K. S. Narayan, T. J. Goodwin, and G. F. Spaulding 459
Extended Primary Culture of Human Hepatocytes in a Collagen Gel Sandwich System
Yumi Kono, Suyun Yang, and Eve A. Roberts 467

GROWTH, DIFFERENTIATION AND SENESCENCE

Individual and Combined Effects of Calciotropic Hormones and Growth Factors on Mineral Metabolism in Embryonic Chick Tibiae
Christian Duvos, Andrew Scutt, and Hubert Mayer 473
Differential Requirements of Two Insect Cell Lines for Growth in Serum-Free Medium
J. L. Vaughn and F. Fan 479

VOLUME 33 NUMBER 7
ISSN 1071-2690
JULY–AUGUST 1997

CONTENTS

BOOK REVIEW

Methods in Molecular Biology
Dana B. Walker and Evelyn Castiglioni 483

LETTERS TO THE EDITOR

Scientific Reports

c-myc, c-H-ras, and IP$_3$ Elevation in 18:2 *n*-6 Dependent Proliferation of Lung Cells
S. Usha and A. Balakrishnan 484
Virus Susceptibilities of New Cell Lines from Embryos of the Whitemarked Tussock Moth
D. E. Lynn and M. Shapiro 487
A Stable Transfected Line of Human Glomerular Epithelial Cells
T. Tsutsui, K. Nitta, W. Yamura, and H. Nihei 489
Responses of HUVEC and EAhy926 to Heparin and Fibroblast Growth Factors
Stephen Thomas, C. Jane Robinson, and Elaine Gray 492
Environmental Chemical Carcinogens Induce Transformation of Breast Epithelial Cells from Women with Familial History of Breast Cancer
Y. F. Hu, I. H. Russo, U. Zalipsky, H. T. Lynch, and J. Russo 495
Recoverin Expression in the R28 Retinal Precursor Cell Line
Gail M. Seigel, Aimee L. Mutchler, Grazyna Adamus, and Eileen L. Imperato-Kalmar 499

BIOTECHNOLOGY

Enhanced Growth of Canine Bone Marrow Stromal Cell Cultures in the Presence of Acidic Fibroblast Growth Factor and Heparin
Shahin Emami, Wilma Merrill, Van Cherington, Gisela G. Chiang, Michael Kirchgesser, Joseph M. Appel, Michael Hansen, Peter H. Levine, Joel S. Greenberger, and David R. Hurwitz 503
An Insect Cell Line Discrimination Method by RAPD-PCR
Yukie Kawai and Jun Mitsuhashi 512

CELLULAR AND MOLECULAR TOXICOLOGY

Cadmium (Cd^{2+}) Disrupts E-Cadherin-Dependent Cell–Cell Junctions in MDCK Cells
Walter C. Prozialeck and Peter C. Lamar 516

CELLULAR MODELS

Effects of Iron Chelates on the Transferrin-Free Culture of Rat Dermal Fibroblasts through Active Oxygen Generation
Noritsugu Yabe and Hisao Matsui 527
Isolating and Maintaining Highly Polarized Primary Epithelial Cells from Normal Human Duodenum for Growth as Spheroid-Like Vesicles
Hans-Jürgen Boxberger, Thomas F. Meyer, Matthias C. Grausam, Kristian Reich, Horst-Dieter Becker, and Michael J. Sessler 536
Functional and Morphological Differentiation of Nonpigmented Ciliary Body Epithelial Cells Grown on Collagen Rafts
Marianne C. Cilluffo, Nasser A. Farahbakhsh, and Gordon L. Fain 546

GROWTH, DIFFERENTIATION AND SENESCENCE

Secretion of Ribonucleases by Normal and Immortalized Cells Grown in Serum-Free Culture Conditions
Michel Moenner, Elissavet Hatzi, and Josette Badet 553
Modulation of Mitogen-Independent Hepatocyte Proliferation During the Perinatal Period in the Rat
Philip A. Gruppuso, Michael Awad, Theresa C. Bieniecki, Joan M. Boylan, Shaneli Fernando, and Ronald A. Faris 562
Modulation of Hepatocyte Function by Changing the Cell Shape in Primary Culture
Kazunobu Sawamoto and Naommy Takahashi 569

GENETICS

Stable Transformation of Insect Cells to Coexpress A Rapidly Selectable Marker Gene and an Inhibitor of Apoptosis
Jeanne R. McLachlin and Lois K. Miller 575

VOLUME 33 NUMBER 8
ISSN 1071-2690
SEPTEMBER 1997

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

Phytic Acid Stimulates the Growth of a Human Rhabdomyosarcoma
Glen S. Germain and Peter J. Houghton 581
Osteopontin Overexpression in Vascular Smooth Muscle Cells Transfected with the c-Ha-*ras*^{f1} Oncogene
Alan R. Parrish, Thomas J. Weber, and Kenneth S. Ramos 584
Extracellular Matrix Promotes Differentiation of Retinal Pigment Epithelium
Daniel A. Ward and Mary Ann Barnhill 588
Amphotericin B Augments Interleukin-6 Production by Human Gingival Fibroblasts *In Vitro*
Carol A. Lapp 592
Ambient Oxygen Affects Uptake of 2-Deoxyglucose and Palmitate by Rat Cardiac Myocytes
Takahiko Suzuki, Shinsuke Katoh, and Youji Mitsui 595
Phenotypic Analysis of Human Fetal Renal Cells Transformed by the SV40 Large T Antigen
Sonia Zunnoni, Francois Boudreau, and Claude Asselin 598
In Vitro Reconstitution of Human Respiratory Epithelium
Makito Emura, Atsushi Ochiai, Gurmukh Singh, Sikandar L. Katyal, and Setsuo Hirohashi 602
Mitogenic Activity of Keratinocyte Growth Factor Amino-Terminal Truncation Mutants: Deletion of Amino Acid Residues 1–15 Through 1–27
Rebecca E. Nybo, Erin N. Everton, and Charles F. Morris 606

CELLULAR MODELS

Differences in Nucleotide Effects on Intracellular pH, Na^+/H^+ Antiport Activity, and ATP-Binding Proteins in Endothelial Cells
Michael Cutaia, Doloretta D. Dawicki, Lisa M. Papazian, Nancy Parks, Ellen Clarke, and Sharon Rounds 608
DNA Transfection in the Ecdysteroid-Responsive GV1 Cell Line from the Tobacco Hornworm, *Manduca sexta*
Que Lan and Lynn M. Riddiford 615

GROWTH, DIFFERENTIATION AND SENESCENCE

Expression of Alpha-Smooth Muscle Actin, TGF-β1 and TGF-β Type II Receptor During Connective Tissue Contraction
M. Reza Ghassemifar, Roy W. Tarnuzzer, Nasser Chegini, Erkki Tarpila, Gregory S. Schultz, and Lennart E. Franzén 622
Immortalization of Mutant p53-Transfected Human Fibroblasts by Treatment with Either 4-nitroquinoline 1-oxide or X-Rays
Keiji Kino, Kazuo Fushimi, Chong Gao, Tomoko Shima, Koichiro Mihara, and Masayoshi Namba 628
The Inability of Cells to Grow in Low Iron Correlates with Increasing Activity of Their Iron Regulatory Protein (IRP)
Jan Kovář, Lukas C. Kühn, Věra Richardson, Christian Seiser, Karin Kriegerbeckovà, and Jana Musilkovà 633

INFECTIOUS DISEASE/CELLULAR PATHOLOGY

Multiplication of a Granulosis Virus Isolated from the Potato Tuber Moth in a New Established Cell Line of *Phthorimaea operculella*
Xavier Léry, Joseph Giannotti, Ahmed Taha, Marc Ravalec, and Said Abol-Ela 640

IMMUNOLOGY

Characterization of Proinflammatory Cytokine Production and CD14 Expression by Murine Alveolar Macrophage Cell Lines
Lisa K. Ryan, Douglas T. Golenbock, Jiayi Wu, and Mary W. Vermeulen 647

VOLUME 33 NUMBER 9
ISSN 1071-2690
OCTOBER 1997

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

Effects of Antisense *hsp*27 Gene Expression in Osteosarcoma Cells
Philippe Rondeaux, Sandrine Horman, Paul Galand, and Nicole Mairesse 655
A Simplified Method for Tissue Engineering Skeletal Muscle Organoids *In Vitro*
Janet Shansky, Michael Del Tatto, Joseph Chromiak, and Herman Vandenburgh 659
Chromosomal Analysis of Two Established Salmonid Cell Lines: CHSE-214 (*Oncorhynchus tschawytscha*) and RTG-2 (*Oncorhynchus mykiss*)
Rafaela Amaro and Laura Sánchez 662
Efficient Introduction of Genes into Human Ovarian Surface Epithelium
Earnest H. Leung, Barry R. Davies, Peter C. K. Leung, George T. C. Chen, Calvin D. Roskelley, and Nelly Auersperg 665
Establishment of Uterine Cell Lines from p53-Deficient Mice
Makoto Hanazono, Hiroko Tomisawa, Yasuhiro Tomooka, Kazuhiko Hirabayashi, and Shinichi Aizawa 668
Cytotoxicity of β-Amyloid Peptide 25-35 on Vascular Smooth Muscle Cells and Attenuation by Vitamin E
Ephraim Tobela Gwebu, Joanne Williams, Dwayne Mathis, Jeannine A. Warden, Michael Selassie, Stephanie Richardson, and Nomalanga Thenjiwe Gwebu 672
Irradiation of Murine Donor Spleen Cells with Ultraviolet "B" Light Eliminates Graft-Versus-Host and Host-Versus-Graft Response in Allogeneic Recipient Mice
S. L. Smith, J. A. Martinson, J. Welter, and J. E. Miripol 674
A Primary Cell Culture Model for Defective Cardiac Myofibrillogenesis in Mexican Axolotl Embryos
Robert W. Zajdel, Yongze Zhu, Margaret E. Fransen, and Larry F. Lemanski 677
Sarcomatous and Adenocarcinoma Cell Lines from the Same Nodule of Cholangiocarcinoma
Munechika Enjoji, Hironori Sakai, Hajime Nawata, Kiyoshi Kajiyama, and Masazumi Tsuneyoshi 681

CELLULAR MODELS

An *In Vitro* Three-Dimensional Coculture Model of Cerebral Microvascular Angiogenesis and Differentiation
Laura R. Ment, William B. Stewart, Dominick Scaramuzzino, and Joseph A. Madri 684
Morphological and Biochemical Characterization of Primary Culture of Rabbit Proximal Kidney Tubule Cells Grown on Collagen-IV Coated Millicell-CM
Isabelle Genestie, Jean-Paul Morin, Christophe Guery, Gerd Bode, and Giocondo Lorenzon 692

GROWTH, DIFFERENTIATION AND SENESCENCE

Restoration of the Differentiated Functions of Serially Passaged Chondrocytes Using Staurosporine
Laurence Barge, Francois Lemare, Sylvie Demignot, and Monique Adolphe 703
Effect of a Mistletoe Extract (Iscador® QuFrF) on Viability and Migratory Behavior of Human Peripheral $CD4^+$ and $CD8^+$ T Lymphocytes in Three-Dimensional Collagen Lattices
G. Nikolai, P. Friedl, M. Werner, B. Niggemann, and K. S. Zänker 710
Establishment and Immunocharacterization of an Immortalized Pancreatic Cell Line Derived from the $H\text{-}2K^b\text{-}tsA58$ Transgenic Mouse
Richard Blouin, Gilles Grondin, Jude Beaudoin, Yoshi Arita, Nathalie Daigle, Brian G. Talbot, Denis Lebel, and Jean Morisset 717

VOLUME 33 NUMBER 10
ISSN 1071-2690
NOVEMBER–DECEMBER 1997

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

High Salt Inhibits Both Heparin-Dependent and Heparin-Independent Complexes of Fibroblast Growth Factor and the Receptor Kinase
Wallace L. McKeehan, Xiaochong Wu, Jun-Hyeog Jang, and Mikio Kan 727
Dimethyl Sulfoxide Inhibits T Lymphocyte Adhesion to Carcinoma Cells
Jonathan Bloy, Willena M. MacKenzie, and David W. Hoskin 731
Size Changes in Differentiating Neuroblastoma Cells
William S. Kisaalita, Robert B. Lund, and Mark Evans 734
The Anti-Mitogenic Activity of 17β-Estradiol in Coronary Smooth Muscle Cells Correlates with Protein Binding to its Responsive Element
K. S. Ramos, D. N. Sadhu, C. J. Meininger, and W. M. Chilian 738
A Reliable System for the Culture of Human Prostatic Cells
Marcus V. Cronauer, Iris E. Eder, Anton Hittmair, Gertraud Sierek, Alfred Hobisch, Zoran Culig, Martin Thurnher, Georg Bartsch, and Helmut Klocker 742
Use of Histoculture and Green Fluorescent Protein to Visualize Tumor Cell Host Interaction
Takashi Chishima, Yohei Miyagi, Lingna Li, Yuying Tan, Eugene Baranov, Meng Yang, Hiroshi Shimada, A. R. Moossa, and Robert M. Hoffman 745
Cytochemical Analysis of Vero Cells on Type I Collagen Gels in Long-Term Culture
Silvya Stuchi Maria and Maria Lucia Furlan Wada 748

CELLULAR MODELS

Contraction and Intracellular Calcium-Ion Elevation of Cultured Human Aortic Smooth Muscle Cells by Endothelin-1, Vasoactive Intestinal Contractor (VIC) and the Derivatives
Akira Iwashima, Mieko Kobayashi, Kaname Saida, Hiroshi Kagamu, Shinichi Ohashi, Masaaki Arakawa, and Youji Mitsui 754
Characterization of Human Osteoblastic Cells: Influence of the Culture Conditions
A. Rattner, O. Sabido, C. Massoubre, E. Rascle, and J. Frey 757
In Vitro Angiogenesis is Modulated by the Mechanical Properties of Fibrin Gels and is Related to α,β, Integrin Localization
Bruno Vailhé, Xavier Ronot, Philippe Tracqui, Yves Usson, and Léone Tranqui 763
Development of Embryonic Chick Insulin Cells in Culture: Beneficial Effects of Serum Free Medium, Raised Nutrients, and Biomatrix
B. B. Rawdon and A. Andrew 774
Human Mammary Cancer Cell Lines and Other Epithelial Cells Cultured as Organoid Tissue in Lenticular Pouches of Reinforced Collagen Membranes
Joseph Leighton 783
Insulin-like Growth Factor (IGF)-I and -II and IGFBP Secretion by Ovine Satellite Cell Strains Grown Alone or in Coculture with 3T3-L1 Preadipocytes
K. L. Hosmer, R. Yemm, J. Vierck, and M. V. Dodson 791
Establishment and Characterization of a Novel *In Vitro* Angiogenesis Model Using a Microvascular Endothelial Cell Line, F-2C, Cultured in Chemically Defined Medium
Chiang-Shan Chen, Ken-Ichi Tada, Yukiya Maruguchi, Norihisa Matsuyoshi, Yuji Horiguchi, and Sadao Imamura 796
In Vitro Culture of B-Lymphocytes Derived from Epstein-Barr Virus-Associated Posttransplant Lymphoproliferative Disease: Cytokine Production and Effect of Interferon-Alpha
Parmjeet Randhawa, Theresa Whiteside, Adriana Zeevi, Michael Nalesnik, Carmelita Alvares, Susanne M. Gollin, Jake Demetris, and Joseph Locker 803

GROWTH, DIFFERENTIATION AND SENESCENCE

Unmasking Large and Persistent Reductions in Proliferation Rate of Aging Cells
Ming Chow, Monica Kong, and Harry Rubin 809
Heparan Sulfate is Required for Interaction and Activation of the Epithelial Cell Fibroblast Growth Factor Receptor 2IIIb with Stromal-Derived Fibroblast Growth Factor 7
Jun-Hyeog Jang, Fen Wang, and Mikio Kan 819

GENETICS

Excision of an Integrated Provirus by the Action of FLP Recombinase
Dirk Schübeler, Christian Mielke, and Jürgen Bode 825

Index 831